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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/704,228 11/01/00 OBESHAW

D DP-300398

EXAMINER

IM52/0829

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ART UNIT

PAPER NUMBER

1775

DATE MAILED:

08/29/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/704,228

Applicant(s)

OBESHAW, DALE

Examiner

John J. Zimmerman

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☒ Claim(s) 10 and 16-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 1775

OFFICE ACTION

Information Disclosure Statement

1. The Information Disclosure Statement received February 16, 2001 has been considered. An initialed form PTO-1449 is enclosed with this Office Action.

Specification

2. The disclosure is objected to because of the following informalities: The section of the specification titled "Brief Description of the Drawings" (page 4) should contain brief individual descriptions of each drawing figure. Appropriate correction is requested.

Double Patenting

3. Applicant is advised that should claim 10 be found allowable, claim 16 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. In addition, applicant is advised that should claim 17 be found allowable, claim 18 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the

Art Unit: 1775

allowed claim. See MPEP § 706.03(k). It is suggested that applicant amend or cancel one of the duplicate claims in order to reduce the issues pending in this application.

Claim Objections

4. Claim 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

5. It is not clear what further limitation is added by claim 4 to the claim upon which it depends. Claim 4 appears to cover all possible embodiments and therefore does not add any further restrictions on the preceding claim.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 5 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 1775

8. It is indefinite as to what is a "light" metal (e.g. claim 5, line 2) or a "heavy" metal (e.g. claim 7, line 2) since there is no official metallurgical standard defining these terms. It is indefinite as to what specific metals or alloys would meet (or would not meet) these intended limitations.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

10. Claims 1-4, 7, 9-10, 16-20 and 34-46 are rejected under 35 U.S.C. 102(e) as being anticipated by Logan (U.S. Patent 6,227,252 B1).

11. Logan discloses a hollow contoured structural member comprising a contoured inner layer, an intermediate honeycomb layer and a contoured outer layer (e.g. see Figures 1-4). Regarding claims 34-36, Logan may not disclose the same process steps, but these claims are product claims and not process claims. When there is a substantially similar product, as in the

Art Unit: 1775

applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q 685, and *In re Fessmann*, 180 U.S.P.Q. 324. Particularly note that in claims 35 and 36, the shrink wrap is added *and* removed and therefore would not be present in the claimed final article.

12. Claims 1-4, 16-20 and 34-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Wilkinson (U.S. Patent 4,161,231).

13. Wilkinson discloses a hollow contoured structural member comprising a contoured inner layer, an intermediate honeycomb layer and a contoured outer layer (e.g. see Figures 1-4).

Regarding claims 34-36, Wilkinson may not disclose the same process steps, but these claims are product claims and not process claims. When there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q 685, and *In re Fessmann*, 180 U.S.P.Q. 324. Particularly note that in claims 35 and 36, the shrink wrap is added *and* removed and therefore would not be present in the claimed final article.

Art Unit: 1775

14. Claim 14 is rejected under 35 U.S.C. 102(a) as being anticipated by Ohrn (U.S. Patent 6,116,290).

15. Ohrn discloses a hollow contoured structural member comprising a contoured inner layer, an intermediate ribbed layer and a contoured outer layer (e.g. see Figures 1-10). The inner layer may be a composite material (e.g. see column 2, lines 32-38).

16. Claims 1-9, 11, 21, 34 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Mann (U.S. Patent 3,332,446).

17. Mann discloses a hollow contoured structural member comprising a contoured inner layer, an intermediate wrapped ribbed structure layer and a contoured outer layer (e.g. see Figures 1-2). Regarding claim 35, Mann may not disclose the same process steps, but these claims are product claims and not process claims. When there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q 685, and *In re Fessmann*, 180 U.S.P.Q. 324. Particularly note that in claims 35, the shrink wrap is added *and* removed and therefore would not be present in the claimed final article.

Art Unit: 1775

18. Claims 1-4, 34 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Frease (U.S. Patent 1,677,714).

19. Frease discloses a hollow contoured structural member comprising a contoured inner layer, an intermediate wrapped ribbed structure layer and a contoured outer layer (e.g. see Figures 1-5). Regarding claim 35, Frease may not disclose the same process steps, but these claims are product claims and not process claims. When there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q. 685, and *In re Fessmann*, 180 U.S.P.Q. 324. Particularly note that in claims 35, the shrink wrap is added *and* removed and therefore would not be present in the claimed final article.

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claims 1-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Logan (U.S. Patent 6,227,252 B1).

Art Unit: 1775

22. Logan discloses a hollow contoured structural member comprising a contoured inner layer, an intermediate honeycomb layer and a contoured outer layer (e.g. see Figures 1-4). Regarding claims drawn to specific materials (e.g. claims 5, 6, 8, etc. . .), Logan may differ from these claims in that Logan only discloses examples of Grade X65 steel (e.g. see column 3, lines 21-23) for his contoured structural member. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use any conventional materials for the contoured structural member that might be suited to particular structural requirements and particular environments in which Logan's structural member might be useful. The examiner takes Official Notice that light metals (e.g. aluminum, titanium, etc. . .), composite materials and stainless steels are conventionally used in piping and therefore their use in Logan's structural configuration would have been considered an obvious variation on the disclosure of Logan. Regarding claim 11, any associated structures conventionally used with piping (e.g. couplings, supports, protective coatings, etc. . .) would satisfy this requirement. Regarding the method claims reciting roll wrapping, the method of wrapping layers and using a mandrel is a conventional method of forming laminated tubular structures in the art and would not be a patentable distinction over Logan for forming Logan's contoured structural member. Regarding article claims that recite the method by which the article is made, Logan may not disclose the same process steps, but these claims are product claims and not process claims. When there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the

Art Unit: 1775

same process of making, see *In re Brown*, 173 U.S.P.Q 685, and *In re Fessmann*, 180 U.S.P.Q. 324.

23. Claims 1-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frease (U.S. Patent 1,677,714).

24. Frease discloses a hollow contoured structural member comprising a contoured inner layer, an intermediate wrapped ribbed structure layer and a contoured outer layer (e.g. see Figures 1-5). Regarding claims drawn to specific materials (e.g. claims 5, 6, 8, etc. . .), Frease may differ from these claims in that Frease may not disclose specific materials for his contoured structural member. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use any conventional materials for the contoured structural member that might be suited to particular structural requirements and particular environments in which Frease's structural member might be useful. The examiner takes Official Notice that light metals (e.g. aluminum, titanium, etc. . .), composite materials and stainless steels are conventionally used in structural members and therefore their use in Frease's structural configuration would have been considered an obvious variation on the disclosure of Frease. Regarding claims to specific intermediate layer configurations that may not be disclosed by Frease (e.g. honeycomb cores), the examiner takes Official Notice that honeycomb configurations are now considered conventional for core materials that have good load bearing properties. In view

Art Unit: 1775

of the above, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use any conventional core configuration known for load bearing properties for the core of Frease because Frease discloses that this is the purpose of the intermediate layers. Regarding the method claims reciting roll wrapping, the method of wrapping layers and using a mandrel is a conventional method of forming laminated tubular structures in the art and would not be a patentable distinction over Frease for forming Frease's contoured structural member. Regarding article claims that recite the method by which the article is made, Frease may not disclose the same process steps, but these claims are product claims and not process claims. When there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q. 685, and *In re Fessmann*, 180 U.S.P.Q. 324.

25. Claims 1-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cappa (U.S. Patent 5,848,767).

26. Cappa discloses forming contoured honeycomb structures by applying an inner face sheet to a mandrel and bending a honeycomb core about the mandrel followed by applying an outer face sheet. Cappa then applies a bag around the structure and uses a vacuum to compact the contoured honeycomb structure while the adhesives are cured (e.g. see column 4, line 64 -

Art Unit: 1775

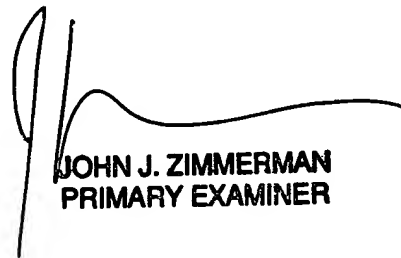
column 6, line 59). Cappa differs from the claims mainly in that Cappa uses a metal honeycomb core and composite sheet inner and outer layers while applicant claims various combinations of metal inner sheet and/or outer sheet construction or combinations of metal and composite sheets in the contoured structure construction. However, Cappa discloses that in order to save weight and meet various requirements for spacecraft, manufacturers in industry have been substituting composite materials for various parts of aluminum structural elements (e.g. see Background of the Invention - column 1, lines 6-67). In addition, the examiner takes Official Notice that using metal for the face sheets in structural honeycomb articles is conventional in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use any combination of composite and metal materials that would best suit the portion of the spacecraft that would be made by Cappa's process because the skilled artisan in this art would find the use of metal and/or composite material face sheets to be an obvious variation on the disclosure of Cappa. Although it is noted that Cappa uses a vacuum bag to secure his structure while it is curing and applicant recites a shrink-wrap materials in some of the pending claims, it would have been obvious to one of ordinary skill in the art at the time the invention was made that a shrink-wrap material performs the same function as the vacuum bag of Cappa and therefore it would not be a patentable distinction over Cappa's disclosed process.

Art Unit: 1775

Conclusion

27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Zimmerman whose telephone number is (703) 308-2512 and whose fax number is (703) 305-5408.



JOHN J. ZIMMERMAN
PRIMARY EXAMINER

jjz
August 17, 2001